

In re TURNER ET AL., Application No. 09/705,395  
Amendment B

### REMARKS

The final Office action dated June 1, 2005, and the references cited have been fully considered. In response, please enter the enclosed Request for Continued Examination (RCE) and the following amendments, and consider the following remarks. Reconsideration and/or further prosecution of the application is respectfully requested. No new matter is added herein.

Applicants appreciate the Office's help in putting this case in condition for allowance, and have changed "irregardless" to the standard English word of "regardless" in claims 27, 35, and 41.

Applicants further appreciate the Office's thoughtful review of independent claim 36 and its depend claims 37-41, but Applicants respectfully traverse the rejections/objections to the drawings, specification, and 35 USC § 112 rejections, and actually are perplexed by them. The Office already agrees that support is provided for the operations themselves and with the requisite illustrations in the figures, but what is at issue is the support of the use of "means for." Applicants respectfully submit that FIGs. 1A-B illustrate (and their corresponding descriptions describe) a small number of the unlimited number of embodiments including means for performing each of these operations described in the originally filed application.

For example, FIG. 1A illustrates an exemplary operating environment and embodiment of the present invention with FIG. 1A illustrating a computer 100 which in one embodiment performs the operations described in the originally filed application, including those illustrated in FIGs 2A-2B, 6A-C, and 7A-B, and can implement the data structures illustrated in FIGs .3, 4A-B, and 5A-D. Similarly, FIG. 2 illustrates a network interface card having control logic with memory 135 configured to receive these information streams and to pace the rate at which these streams are sent out of the network interface as described in the originally filed application.

Therefore, Applicants respectfully submit that the originally filed application has more than adequate support for these claims, and one skilled in the art would understand that Applicants had in their possession, at time of filing of the original application, the claimed invention of each claims. One skilled in the art would clearly understand that the computer or

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control logic shown in FIGs. 1A-B were included to provide and illustrate a small number of an unlimited number of embodiments and means for performing the operations described in the originally filed application and illustrated in the figures. Therefore, Applicants respectfully submit that the original application describes and illustrates the "means for" performing each of these operations. For at least these reasons, Applicants respectfully request that these objections and rejections be withdrawn.

In terms of the claim rejections based on prior art, Applicants respectfully submit that the prior art of record neither teaches nor suggests transmit lists in conjunction with timing wheels as claimed in the present application, and incorporate by reference the remarks made in Amendment A filed December 27, 2005. Rather than currently arguing semantics of "a transmit list" in an appeal and how the prior art of record clearly fails to teach at least this limitation, Applicants have filed an RCE with this amendment in good faith in order to further prosecution as this case has been pending for an extremely long duration.

There are five pending independent claims: 1, 12, 14, 30 and 33, each of these including a limitations of timing wheels and transit list(s) claimed in a novel and non-obvious manner over the prior art of record. By removing items from the timing wheels and placing them in the transit lists at an appropriate time, and processing items from the transmit lists and then rescheduling the processed items into the timing wheels allows a decoupling of the removal of entries from the timing wheels, from the sending of information and rescheduling of the information stream. This is an advantage that some claimed embodiments have over the prior art of record, and is neither taught nor suggested by the prior art of record.

Applicants have amended each of these independent claims, not to narrow the claims, but to define the transmit lists as being distinct from the timing data structures of the timing wheels, as well as to ensure the claims have the proper relationship between limitations in the claims. Support for these amendments is provided at least by FIG. 2A which illustrates the timing wheels 201A-C with the distinct transmit list 205 configured to store multiple entries/identifiers, as well as FIG. 2B which also shows this distinction and as discussed on

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pages 11-13 of the original application, and at least by FIGs. 6A and 6B, which describes the operations performed in one embodiment for removing entries from the timing wheel(s) and placing them in the transmit list(s), and in response to identifying the next entry of the transmit list to process, removing the entry from the transmit list, retrieving and sending information, determining a new target time, and re-inserting the entry into the timing wheel(s).

In terms of the prior art of record, neither Delp et al. nor Bryn et al. teach transmit lists used in conjunction with timing wheels, let alone as claimed in the present application. The teaching relied upon by Delp et al. in FIG. 3 and column 5, lines 23-44 is the chain of LCDs - which is merely the chain of entries at a current position within the timing wheel - which is not a transmit list as disclosed and claimed in the present application. Delp et al. explicitly teaches that "the LCD contains the next LCD pointer 209 that can be used to point to the next LCD *stored in the same slot in the timing wheel*. This pointer is used to create a chain of LCDs *for each active time slot*." Delp et al., col. 5, lines 35-39 (*emphasis added*.) Bryn et al. neither teaches nor suggests a transmit list distinct from data structures of the timing wheels identifying timing positions within the timing wheels nor a transmit list configured for maintaining a multiple entries removed from said timing wheels, and in fact, teaches the opposite in that it teaches that QIDs are serviced one by one without this timing wheel - transmit list decoupling as the "current position is advanced only after all the QIDs at the current position have been serviced." Bryn et al. teaches that you process one QID at a time (e.g., send to the MMU for sending cells corresponding to the single QID) and then repeats this (i.e., do it for the next QID still in the scheduling data structure), even if multiple QIDs are scheduled at a same timing position. Bryn et al. and teaches you do not remove a QID from the current wheel position until *after* a cell transmission (and thus defeats the motivation or ability to use a transmit list and neither teaches nor suggests all the recited limitations which recite an ordering for the removal from the timing wheels -> added to the transmit list -> removed from the transmit list and processed -> added to the timing wheel). Bryn et al., col. 5, lines 56-59 (The QID is removed from the current wheel position after a cell transmission from the queue pointed to by that QID, and the process [i.e.,

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getting the next QID and sending it to the MMC, sending the cells, then removing the QID from the scheduling data structure] is repeated until all cells scheduled at the current wheel position are transmitted.)

For at least these reasons, Applicants respectfully submit that all claims are allowable over the prior art of record, and as the Office has determined that these are the best references available, then the claims are allowable over the best references available. Applicants respectfully request that all rejections and objections be withdrawn, and the application be passed to issuance as these amendments put it in condition for allowance and issuance.

**Final Remarks.** In view of the above remarks and for at least the reasons presented herein, all pending claims are believed to be allowable over the prior art of record, the application is considered in good and proper form for allowance, and the Office is respectfully requested to issue a timely Notice of allowance in this case. If, in the opinion of the Office, a telephone conference would expedite the prosecution of the subject application, the Office is invited to call the undersigned attorney.

Applicants believe a one-month extension of time is required, hereby petitions for the one-month extension or any such extension of time deemed required and authorizes the Commissioner to charge any associated fees to Deposit Account No. 501430.

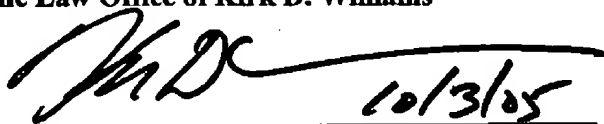
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Additionally, the Commissioner is hereby generally authorized under 37 C.F.R. § 1.136(a)(3) to treat this communication or any future communication in this or any related application filed pursuant to 37 C.F.R. § 1.53 requiring an extension of time as incorporating a request therefore, and the Commissioner is hereby specifically authorized to charge Deposit Account No. 501430 for any fee that may be due in connection with such a request for an extension of time. Moreover, the Commissioner is hereby authorized to charge payment of any fee due any under 37 C.F.R. §§ 1.16 and § 1.17 associated with this communication or any future communication in this or any related application filed pursuant to 37 C.F.R. § 1.53 or credit any overpayment to Deposit Account No. 501430.

Respectfully submitted,  
The Law Office of Kirk D. Williams

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By



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